

PSYCHOLOGY

New Tests Of Temperament

Soon it will not be necessary to guess what kind of person you are picking for a certain job. You will not have to try to tell a man's character from his expression or mannerisms.

By MARJORIE VAN DE WATER

► SINCE TIME immemorial men have been trying to size each other up by looking—at facial expressions, gestures, way of walking, mannerisms and other expressions of individual personality.

Now psychologists have found that you can learn of a man's temperament much better by finding out how he looks at his world rather than how he appears to his fellows.

New motto of psychologists is "Tell me what you see, and I will tell you what you are." Two men can look at exactly the same thing and each see something completely different.

You have all seen the "animated signs" that enliven the night along your own particular "Great White Way," and have been amused at the kitten playing with the balls of silk or the bathing girl diving into the water. You know, of course, that the figures on the signs do not actually move. The illusion is created by the successive lighting of series of colored light bulbs.

This same principle is now used in a movie that serves as an objective test of temperament. This movie shows colored spots of various shapes moving across a clock face. Successive frames show the spot of any given shape in successive positions moving across the clock face.

If you are following the round dot, for example, it appears to move from 8 o'clock to 2. The colors appear to flicker. But if you are paying attention to the red spot, it will appear to move from 2 o'clock to 8 and in this case the shape will flicker.

Distinguish Personality Traits

The fact that this simple color film test can actually show up the natural temperamental differences between different persons was discovered by Dr. L. L. Thurstone, psychologist, of the University of Chicago, who developed the film in research under contract with the United States Air Force Human Resources Research Center.

He found that here was an objective way to distinguish between the active, socially at ease, go-getter type of person who would make a good salesman and the man who is best at thinking things through quietly and might make a good scientist or philosopher.

Now it happens that the person who follows the form and does not pay attention to the color is one kind of individual. The person who follows the constant color and pays no particular attention to the shape is a quite different sort.

If you are one who naturally follows the form regardless of changing color, you are probably a person without striking emotional ups and downs. You like to be around other people and naturally take the lead in a group. You can devote yourself to handling matters as they are and do not plague yourself with imaginary fears and fancies. You are sure of yourself, and inclined to take strong action.

As a check on themselves, the psychologists planned the film so that the color procession would sometimes go up across the clock face instead of down. And the shape movement would take the opposite direction, too. This disclosed a very interesting fact. Some people always tend to see the movement as up regardless of whether it is a movement of form or color. Others see the down movement.

Those who follow movement up, characteristically, turned out to be somewhat like the form-dominant folk. They get

along well with people. They are emotionally stable and like to be the leader in a group. They are deliberate in their actions, cheerful and self-confident.

The ones who follow down movements tend to be timid and lacking in self-confidence. They are not active physically but like to sit and think alone. They do not, however, trust their own decisions.

Individuals who see the movement as going to the left, from 3 o'clock to 9, rather than from left to right, are likely to be independent. They talk freely and are happy with others. They like to lead.

Two Possible Interpretations

Those who see the movement toward the right are the quiet thinkers. They are not at all aggressive. If they want to persuade someone to do something, they would much rather sit down quietly and write a letter about it than they would to talk it over face to face. Such a person might be expected to feel at ease when he must spend long hours alone at the controls of an airplane cruising above the clouds.

When a person sits watching this film and he is asked in which direction the dots



WHAT IS IT?—Your answer to this question will show what is uppermost in your mind. Perhaps you will see it as an X-ray picture, Mickey Mouse, witches dancing in the wood or a cowboy, or you may see something that looks like an eye at the right. When you look at the picture in true focus on p. 175, do not be surprised that you did not know all the time.

appear to be moving, he usually answers immediately without hesitation. Apparently he sees only one movement and is quite unaware that an apparent movement may be seen in the other direction, too. However, if he keeps on watching the same film, the movement will seem to shift unaccountably to the opposite direction and later back again.

And if he is color blind, then he will naturally notice only the procession of form.

Devise Other Tests

This color film, although very promising, is only one of some 65 tests with which Dr. Thurstone has been experimenting. Another which he expects to construct and try out soon consists of a series of photographs. The first is printed badly out of focus. The person taking the test is asked to say what this fuzzy blob is a picture of. Each succeeding print is a little clearer than the last until the final one is in sharp focus.

It is believed that the speed with which a guess is made and the kind of object seen in the fuzzy picture may provide a good clue to personality.

This is a projective test like the well-known ink blot test, the Rorschach, but the scoring of it would be less dependent upon the personality of the examiner.

Another kind of test that is being tried is one of word association. This is similar to a test used to trip up criminals. In the examination of suspects, words are presented that are linked in some way to the scene of the crime, like "knife," "blood," or "bullet." The criminal betrays himself if his answer shows he is familiar with conditions at the scene, or if a delay in responding shows that he is trying to hide what has naturally come to his mind.

In the test as given by Dr. Thurstone, each word has several meanings. "Brass," for example, might be taken as meaning the metal or it might be thought of as "effrontery." The particular meaning seen in the different words will disclose something of the individual's character make-up, it is hoped.

Word Tests Tried

In another test, words are presented in pairs and the person taking the test is to indicate which word is stronger. Some of the pairs are emotionally neutral, as "colossal," and "large," while some are positive and some negative, emotionally. The supposition here is that the relative ease of identifying strength of meaning for the positive, negative, and neutral words will show up differences in temperament.

In every case, Dr. Thurstone is trying to keep the tests free from influence of the personality of the examiner.

Dr. Thurstone was not the first investigator to realize that concern with form or color was significant in distinguishing certain personality traits. Form dominance and color dominance are also important in the Rorschach ink blot test. In this test the individual looks at a series of blobs of ink

and tells what he sees in them. This is called a "projective" test because the blots are so ambiguous that the viewer sees in them only what he projects into them himself.

He sees the images that fill his own mind—his own fancy. What he sees, therefore, depends entirely upon what objects are foremost in his mind. The medical student is likely to see a drawing of human internal organs, the poet may see fairies dancing in a moonlit meadow, the individual who is mentally ill may see a pool of blood, a child may see a group kneeling down to play marbles, and so on.

The Rorschach test has been criticized by many psychologists because the results depend so much upon the professional skill or even the personality of the person who interprets them. Dr. Thurstone says, "The interpretations of the scores seem to be as projective for the examiner as for the subject."

Science News Letter, September 12, 1953

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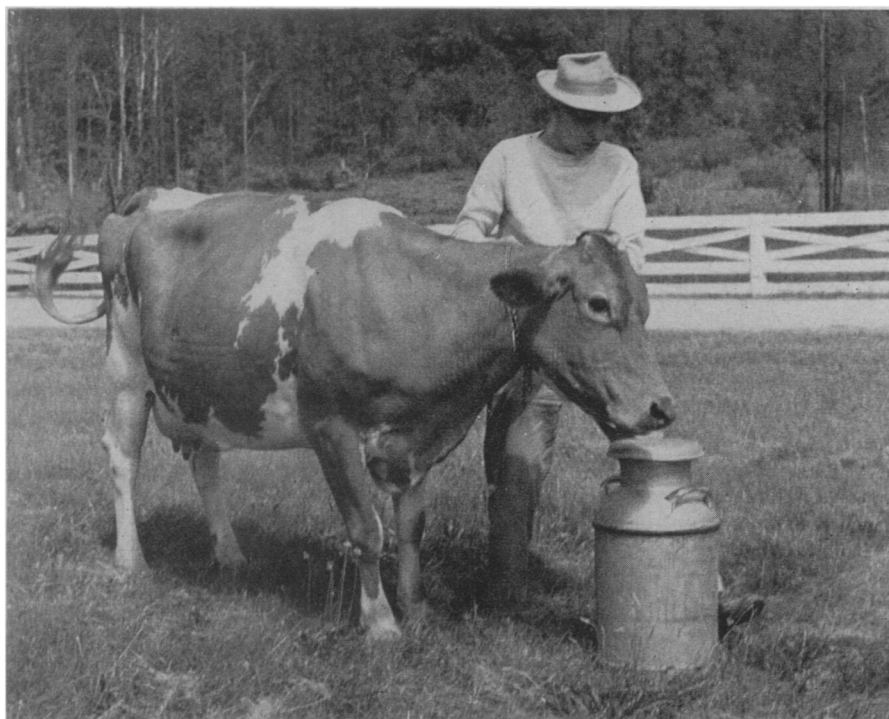
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TEMPERAMENT TEST IN FOCUS—This is the in-focus print of the photograph shown on page 170. For camera fans, the picture on this page is made first. Then the bellows of the enlarger is extended to throw the image out of focus for the test print.

RADIO ASTRONOMY

Collisions of Galaxies

► **GIGANTIC COLLISIONS** of galaxies may cause the powerful radio waves reaching earth from outer space. Such galactic clashes result in violent motion of the tenuous gas between the stars.

Dr. Fred Hoyle of St. John's College, Cambridge, Eng., working temporarily at the Dominion Astrophysical Observatory, Victoria, B. C., upholds this theory of the origin of cosmic noise.

Drs. Walter Baade and Rudolph L. Minkowski of the Mount Palomar Observatory, Calif., have recently discovered in Cygnus,

the swan, one source of radio noise from outer space that appears to be two galaxies in collision. While the stars of one galaxy are passing between the stars of the other, the extremely thin gas between them must be stirred up into very violent motion, thus generating the powerful radio waves.

The two galaxies are rushing at each other at a velocity of perhaps 1,800 miles per second, Dr. Hoyle believes. Such a very high velocity probably means that the ions, or electrically charged particles of which the neutral gas is composed, have a high temperature. It is this high electron temperature, Dr. Hoyle says in *Nature* (Aug. 15), that causes the radio wave radiation.

The two galaxies in collision are surrounded by a great gas cloud, perhaps 200,000 million million miles across at an electron temperature of 100,000,000 degrees absolute. Radiation from such a source, Dr. Hoyle calculates, would be at least as intense as that which has been found coming from the source in Cygnus. Such radiation would be sufficient to be detected even if the source were so far away that it was beyond the range of the greatest optical telescopes.

The rate of radiation is very much increased because the electrically charged particles are not found evenly distributed, but

are separated somewhat according to their charges. This separation of charge is due to the slight magnetic field.

Dr. Hoyle's theory would also apply to the sources of radio noise in Cassiopeia and the Crab nebula.

Science News Letter, September 12, 1953

QUESTIONS

GENERAL SCIENCE—What are three definitions of a calorie? p. 166.

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MEDICINE—Why should doctors learn about folk cures? p. 166.

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PSYCHOLOGY—How can what you see tell what you are? p. 170.

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PUBLIC SAFETY—What are the objections to use of "bug" deflectors? p. 164.

• • •

SURGERY—How can cancer patients be spared useless operations? p. 168.

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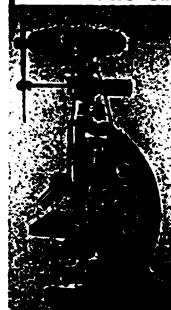
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